

## NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Permits, Region 4

1130 North Westcott Road, Schenectady, NY 12306-2014

P: (518) 357-2069 | F: (518) 357-2460

[www.dec.ny.gov](http://www.dec.ny.gov)

Transmitted electronically to: [brian.wilcox@biopyro.com](mailto:brian.wilcox@biopyro.com)

November 8, 2019

Brian D. Wilcox  
BPS Schenectady SPV 1 LLC  
433 State Street, 4<sup>th</sup> Floor  
Schenectady, New York 12305

**Re: Air State Facility Permit**  
**DEC #4-4215-00026/00005**  
Schenectady Biowaste Pyrolysis Plant  
300 Anthony Street  
City of Schenectady, Schenectady County

Dear Mr. Wilcox:

The above-referenced permit that you applied for is enclosed. Please read it carefully and note the conditions that are included. The permit is valid for only those activities authorized and will **expire on November 7, 2029**. Work beyond the scope of the permit and the approved project plans may be considered a violation of the law and subject to appropriate enforcement action.

Please be advised that the Uniform Procedures Regulations (6 NYCRR Part 621) provide that an applicant may request a public hearing if a permit is denied or contains conditions which are unacceptable to them. Any such request must be made in writing within 30 calendar days of the date of permit issuance and must be addressed to the Regional Permit Administrator at the letterhead address. A copy should also be sent to the Chief Administrative Law Judge at NYSDEC, 625 Broadway, 1st Floor, Albany, NY 12233-1550.

Also note that this permit does not eliminate the need to obtain any other federal, state or local permits or approvals that may be required for this project. If you need additional time to complete the project, you may request a permit extension. Please reference the above DEC number, include an explanation why additional time is required and indicate the anticipated completion date.

Please feel free to contact me at (518) 357-2445 or by email at [trish.gabriel@dec.ny.gov](mailto:trish.gabriel@dec.ny.gov) should you have any questions regarding the extent of the work authorized, or your obligations under the permit.

Sincerely,



Patricia M. Gabriel  
Environmental Analyst

Encl: ASF Permit

ecc: Ben Potter, DEC R4 RAPSE  
Mark Lanzafame, DEC R4 Air Resources  
Ray Porter, Porter Odor Science  
Sam Sylvetsky, Biowaste Pyrolysis Solutions  
Paul Lafond, City of Schenectady



Facility DEC ID: 4421500026

**PERMIT**  
**Under the Environmental Conservation Law (ECL)**

**IDENTIFICATION INFORMATION**

Permit Type: Air State Facility  
Permit ID: 4-4215-00026/00005  
Effective Date: 11/08/2019      Expiration Date: 11/07/2029

Permit Issued To: BPS Schenectady SPV 1 LLC  
433 State St 4th Fl  
Schenectady, NY 12305

Contact: Samuel M Sylvetsky  
1550 S Ocean Blvd  
Lantana, FL 33462  
(518) 421-4130

Facility: Schenectady Biowaste Pyrolysis Plant  
300 Anthony Street  
Schenectady, NY 12305

Contact: Brian D Wilcox  
433 State St Fl 4  
Schenectady, NY 12305  
(518) 366-0220

**Description:**

This permit authorizes the construction and operation of a new biowaste pyrolysis facility within the existing biosolids composting building at the City of Schenectady wastewater treatment plant (WTP). This facility will be owned by a company that is separate from the existing WTP.

The Schenectady Biowaste Pyrolysis project will treat biosolids obtained from publicly-owned treatment works, including the Schenectady WTP, using thermal drying processes and a pyrolysis unit. The resulting syngas generated from the pyrolysis unit will be directed to a flare.

By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the ECL, all applicable regulations, the General Conditions specified and any Special Conditions included as part of this permit.

Permit Administrator: NANCY M BAKER  
NYSDEC - REGION 4  
1130 N WESTCOTT RD  
SCHENECTADY, NY 12306-2014

Authorized Signature: \_\_\_\_\_

*Nancy M Baker*

Date: 11 / 08 / 2019

Facility DEC ID: 4421500026

**Notification of Other State Permittee Obligations**

**Item A: Permittee Accepts Legal Responsibility and Agrees to Indemnification**

The permittee expressly agrees to indemnify and hold harmless the Department of Environmental Conservation of the State of New York, its representatives, employees and agents ("DEC") for all claims, suits, actions, and damages, to the extent attributable to the permittee's acts or omissions in connection with the compliance permittee's undertaking of activities in connection with, or operation and maintenance of, the facility or facilities authorized by the permit whether in compliance or not in any compliance with the terms and conditions of the permit. This indemnification does not extend to any claims, suits, actions, or damages to the extent attributable to DEC's own negligent or intentional acts or omissions, or to any claims, suits, or actions naming the DEC and arising under article 78 of the New York Civil Practice Laws and Rules or any citizen suit or civil rights provision under federal or state laws.

**Item B: Permittee's Contractors to Comply with Permit**

The permittee is responsible for informing its independent contractors, employees, agents and assigns of their responsibility to comply with this permit, including all special conditions while acting as the permittee's agent with respect to the permitted activities, and such persons shall be subject to the same sanctions for violations of the Environmental Conservation Law as those prescribed for the permittee.

**Item C: Permittee Responsible for Obtaining Other Required Permits**

The permittee is responsible for obtaining any other permits, approvals, lands, easements and rights-of-way that may be required to carry out the activities that are authorized by this permit.

**Item D: No Right to Trespass or Interfere with Riparian Rights**

This permit does not convey to the permittee any right to trespass upon the lands or interfere with the riparian rights of others in order to perform the permitted work nor does it authorize the impairment of any rights, title, or interest in real or personal property held or vested in a person not a party to the permit.

Facility DEC ID: 4421500026

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**DEC GENERAL CONDITIONS**

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Facility DEC ID: 4421500026

**DEC GENERAL CONDITIONS**

\*\*\*\* General Provisions \*\*\*\*

**GENERAL CONDITIONS - Apply to ALL Authorized Permits.**

**Condition 1: Facility Inspection by the Department**

**Applicable State Requirement: ECL 19-0305**

**Item 1.1:**

The permitted site or facility, including relevant records, is subject to inspection at reasonable hours and intervals by an authorized representative of the Department of Environmental Conservation (the Department) to determine whether the permittee is complying with this permit and the ECL. Such representative may order the work suspended pursuant to ECL 71-0301 and SAPA 401(3).

**Item 1.2:**

The permittee shall provide a person to accompany the Department's representative during an inspection to the permit area when requested by the Department.

**Item 1.3:**

A copy of this permit, including all referenced maps, drawings and special conditions, must be available for inspection by the Department at all times at the project site or facility. Failure to produce a copy of the permit upon request by a Department representative is a violation of this permit.

**Condition 2: Relationship of this Permit to Other Department Orders and Determinations**

**Applicable State Requirement: ECL 3-0301 (2) (m)**

**Item 2.1:**

Unless expressly provided for by the Department, issuance of this permit does not modify, supersede or rescind any order or determination previously issued by the Department or any of the terms, conditions or requirements contained in such order or determination.

**Condition 3: Applications for permit renewals, modifications and transfers**

**Applicable State Requirement: 6 NYCRR 621.11**

**Item 3.1:**

The permittee must submit a separate written application to the Department for renewal, modification or transfer of this permit. Such application must include any forms or supplemental information the Department requires. Any renewal, modification or transfer granted by the Department must be in writing.

**Item 3.2:**

The permittee must submit a renewal application at least 180 days before the expiration of permits for Title V and State Facility Permits.

**Item 3.3**

Permits are transferrable with the approval of the department unless specifically prohibited by the statute, regulation or another permit condition. Applications for permit transfer should be submitted prior to actual transfer of ownership.

Facility DEC ID: 4421500026

**Condition 4: Permit modifications, suspensions or revocations by the Department**

**Applicable State Requirement: 6 NYCRR 621.13**

**Item 4.1:**

The Department reserves the right to exercise all available authority to modify, suspend, or revoke this permit in accordance with 6NYCRR Part 621. The grounds for modification, suspension or revocation include:

- a) materially false or inaccurate statements in the permit application or supporting papers;
- b) failure by the permittee to comply with any terms or conditions of the permit;
- c) exceeding the scope of the project as described in the permit application;
- d) newly discovered material information or a material change in environmental conditions, relevant technology or applicable law or regulations since the issuance of the existing permit;
- e) noncompliance with previously issued permit conditions, orders of the commissioner, any provisions of the Environmental Conservation Law or regulations of the Department related to the permitted activity.

**\*\*\*\* Facility Level \*\*\*\***

**Condition 5: Submission of application for permit modification or renewal  
REGION 4 HEADQUARTERS**

**Applicable State Requirement: 6 NYCRR 621.6 (a)**

**Item 5.1:**

Submission of applications for permit modification or renewal are to be submitted to:

NYSDEC Regional Permit Administrator  
Region 4 Headquarters  
Division of Environmental Permits  
1130 North Westcott Rd.  
Schenectady, NY 12306-2014  
(518) 357-2069

**Permit ID: 4-4215-00026/00005**

**Facility DEC ID: 4421500026**

**Permit Under the Environmental Conservation Law (ECL)**

**ARTICLE 19: AIR POLLUTION CONTROL - AIR STATE FACILITY PERMIT**

**IDENTIFICATION INFORMATION**

Permit Issued To: BPS Schenectady SPV 1 LLC  
433 State St 4th Fl  
Schenectady, NY 12305

Facility: Schenectady Biowaste Pyrolysis  
Plant 300 Anthony Street  
Schenectady, NY 12305

Authorized Activity By Standard Industrial Classification Code:  
4952 - SEWERAGE SYSTEMS  
4959 - SANITARY SERVICES, NEC

Permit Effective Date: 11/08/2019

Permit Expiration Date: 11/07/2029



Permit ID: 4-4215-00026/00005

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## FEDERALLY ENFORCEABLE CONDITIONS

\*\*\*\* Facility Level \*\*\*\*

### NOTIFICATION OF GENERAL PERMITTEE OBLIGATIONS

This section contains terms and conditions which are federally enforceable. Permittees may also have other obligations under regulations of general applicability

**Item A: Sealing - 6 NYCRR 200.5**

The Commissioner may seal an air contamination source to prevent its operation if compliance with 6 NYCRR Chapter III is not met within the time provided by an order of the Commissioner issued in the case of the violation. Sealing means labeling or tagging a source to notify any person that operation of the source is prohibited, and also includes physical means of preventing the operation of an air contamination source without resulting in destruction of any equipment associated with such source, and includes, but is not limited to, bolting, chaining or wiring shut control panels, apertures or conduits associated with such source.

No person shall operate any air contamination source sealed by the Commissioner in accordance with this section unless a modification has been made which enables such source to comply with all requirements applicable to such modification.

Unless authorized by the Commissioner, no person shall remove or alter any seal affixed to any contamination source in accordance with this section.

**Item B: Acceptable Ambient Air Quality - 6 NYCRR 200.6**

Notwithstanding the provisions of 6 NYCRR Chapter III, Subchapter A, no person shall allow or permit any air contamination source to emit air contaminants in quantities which alone or in combination with emissions from other air contamination sources would contravene any applicable ambient air quality standard and/or cause air pollution. In such cases where contravention occurs or may occur, the Commissioner shall specify the degree and/or method of emission control required.

**Item C: Maintenance of Equipment - 6 NYCRR 200.7**

Any person who owns or operates an air contamination source which is equipped with an emission control device shall operate such device and keep it in a satisfactory state of maintenance and repair in accordance with ordinary and necessary practices, standards and procedures, inclusive of manufacturer's specifications, required to operate such device effectively.

**Item D: Unpermitted Emission Sources - 6 NYCRR 201-1.2**

If an existing emission source was subject to the permitting requirements of 6 NYCRR Part 201 at the time of construction or

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modification, and the owner and/or operator failed to apply for a permit for such emission source then the following provisions apply:

(a) The owner and/or operator must apply for a permit for such emission source or register the facility in accordance with the provisions of Part 201.

(b) The emission source or facility is subject to all regulations that were applicable to it at the time of construction or modification and any subsequent requirements applicable to existing sources or facilities.

**Item E: Recycling and Salvage - 6 NYCRR 201-1.7**

Where practical, any person who owns or operates an air contamination source shall recycle or salvage air contaminants collected in an air cleaning device according to the requirements of 6 NYCRR.

**Item F: Prohibition of Reintroduction of Collected Contaminants to the Air - 6 NYCRR 201-1.8**

No person shall unnecessarily remove, handle, or cause to be handled, collected air contaminants from an air cleaning device for recycling, salvage or disposal in a manner that would reintroduce them to the outdoor atmosphere.

**Item G: Proof of Eligibility for Sources Defined as Exempt Activities - 6 NYCRR 201-3.2 (a)**

The owner and/or operator of an emission source or unit that is eligible to be exempt, may be required to certify that it operates within the specific criteria described in 6 NYCRR Subpart 201-3. The owner or operator of any such emission source must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility which contains emission sources or units subject to 6 NYCRR Subpart 201-3, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations, or law.

**Item H: Proof of Eligibility for Sources Defined as Trivial Activities - 6 NYCRR 201-3.3 (a)**

The owner and/or operator of an emission source or unit that is listed as being trivial in 6 NYCRR Part 201 may be required to certify that it operates within the specific criteria described in 6 NYCRR Subpart 201-3. The owner or operator of any such emission source must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility which contains emission sources or units subject to 6 NYCRR Subpart 201-3, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations, or law.

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**Item I: Required Emission Tests - 6 NYCRR 202-1.1**

An acceptable report of measured emissions shall be submitted, as may be required by the Commissioner, to ascertain compliance or noncompliance with any air pollution code, rule, or regulation. Failure to submit a report acceptable to the Commissioner within the time stated shall be sufficient reason for the Commissioner to suspend or deny an operating permit. Notification and acceptable procedures are specified in 6 NYCRR Subpart 202-1.

**Item J: Open Fires Prohibitions - 6 NYCRR 215.2**

Except as allowed by section 215.3 of 6 NYCRR Part 215, no person shall burn, cause, suffer, allow or permit the burning of any materials in an open fire.

**Item K: Permit Exclusion - ECL 19-0305**

The issuance of this permit by the Department and the receipt thereof by the Applicant does not and shall not be construed as barring, diminishing, adjudicating or in any way affecting any legal, administrative or equitable rights or claims, actions, suits, causes of action or demands whatsoever that the Department may have against the Applicant for violations based on facts and circumstances alleged to have occurred or existed prior to the effective date of this permit, including, but not limited to, any enforcement action authorized pursuant to the provisions of applicable federal law, the Environmental Conservation Law of the State of New York (ECL) and Chapter III of the Official Compilation of the Codes, Rules and Regulations of the State of New York (NYCRR). The issuance of this permit also shall not in any way affect pending or future enforcement actions under the Clean Air Act brought by the United States or any person.

**Item L: Federally Enforceable Requirements - 40 CFR 70.6 (b)**

All terms and conditions in this permit required by the Act or any applicable requirement, including any provisions designed to limit a facility's potential to emit, are enforceable by the Administrator and citizens under the Act. The Department has, in this permit, specifically designated any terms and conditions that are not required under the Act or under any of its applicable requirements as being enforceable under only state regulations.

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Facility DEC ID: 4421500026

**FEDERAL APPLICABLE REQUIREMENTS**  
**The following conditions are federally enforceable.**

**Condition 1: Visible Emissions Limited**  
**Effective between the dates of 11/08/2019 and 11/07/2029**

**Applicable Federal Requirement: 6 NYCRR 211.2**

**Item 1.1:**

Except as permitted by a specific part of this Subchapter and for open fires for which a restricted burning permit has been issued, no person shall cause or allow any air contamination source to emit any material having an opacity equal to or greater than 20 percent (six minute average) except for one continuous six-minute period per hour of not more than 57 percent opacity.

**Condition 2: Compliance Demonstration**  
**Effective between the dates of 11/08/2019 and 11/07/2029**

**Applicable Federal Requirement: 6 NYCRR 212-1.6 (a)**

**Item 2.1:**

The Compliance Demonstration activity will be performed for the Facility.

**Item 2.2:**

Compliance Demonstration shall include the following monitoring:

Monitoring Type: MONITORING OF PROCESS OR CONTROL DEVICE  
PARAMETERS AS SURROGATE

Monitoring Description:

No person shall cause or allow emissions having an average opacity during any six consecutive minutes of 20 percent or greater from any process emission source, except only the emission of uncombined water.

The Department reserves the right to perform, or require the performance of, a USEPA Method 9 opacity observation at any time to demonstrate compliance with this condition.

Parameter Monitored: OPACITY

Upper Permit Limit: 20 percent

Reference Test Method: EPA Reference Test Method 9

Monitoring Frequency: DAILY

Averaging Method: 6-MINUTE AVERAGE (METHOD 9)

Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

Permit ID: 4-4215-00026/00005

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In order to verify the metals emission rates used in the air state facility permit application for this facility and the stated control efficiency of the wet scrubber, the facility owner or operator shall conduct a stack test of the process emission stack (Emission Point 00001) within 180 days of the commencement of operation of the facility.

The stack test required by this condition shall be conducted pursuant to a Department approved testing protocol. The facility owner or operator shall submit a proposed testing protocol to the Department at least 30 days in advance of the testing date. The testing protocol must contain provisions for determining the emission rates of arsenic, cadmium, chromium, lead, mercury, nickel, total particulate matter, and volatile organic compounds. The stack test shall also determine the control efficiency of the wet scrubber, the necessary scrubber water flow rate to meet that control efficiency, and the opacity of emissions during normal operation.

The facility owner or operator shall promptly notify the Department of any changes in the testing schedule, and shall allow Department personnel to witness the test.

The facility owner or operator shall submit a test report to the Department no later than 60 days after the completion of testing.

All test protocols, reports, and procedures shall be consistent with the requirements of 6 NYCRR Part 202, USEPA Reference Test Methods (or equivalent), and good engineering practice.

The facility owner or operator shall conduct additional testing upon request by the Department.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION  
Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

**Condition 4: Compliance Demonstration**  
**Effective between the dates of 11/08/2019 and 11/07/2029**  
**Applicable Federal Requirement: 6 NYCRR 212-2.4 (b)**

**Item 4.1:**  
The Compliance Demonstration activity will be performed for the Facility.

Regulated Contaminant(s):  
CAS No: 0NY075-00-5 PM-10

Permit ID: 4-4215-00026/00005

Facility DEC ID: 4421500026

**Item 4.2:**

Compliance Demonstration shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

The control of particulate emissions released from new and modified process emission sources.

Emissions from any process emission source for which an application was received by the department after July 1, 1973 are restricted as follows:

No facility owner or operator shall cause or allow emissions of particulate that exceed 0.050 grains per cubic foot of exhaust gas, expressed at standard conditions on a dry gas basis, except in instances where determination of permissible emission rate using process weight for a specific source category emitting solid particulate is based upon Table 5 and Table 6 of Subdivisions 212-2.5(a) and (b) of this Part.

As per 212-1.7(a) 'Sampling and monitoring' section, facility owners and/or operators of a process emission source required by the department to demonstrate compliance with this Part may be required to conduct capture efficiency and/or stack emissions testing using acceptable and approved procedures pursuant to Part 202 of this Title.

Parameter Monitored: PM-10

Upper Permit Limit: 0.050 grains per dscf

Averaging Method: AVERAGING METHOD - SEE MONITORING DESCRIPTION

Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

Permit ID: 4-4215-00026/00005

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**STATE ONLY ENFORCEABLE CONDITIONS****\*\*\*\* Facility Level \*\*\*\*****NOTIFICATION OF GENERAL PERMITTEE OBLIGATIONS**

**This section contains terms and conditions which are not federally enforceable. Permittees may also have other obligations under regulations of general applicability**

**Item A: Emergency Defense - 6 NYCRR 201-1.5**

An emergency, as defined by subpart 201-2, constitutes an affirmative defense to penalties sought in an enforcement action brought by the Department for noncompliance with emissions limitations or permit conditions for all facilities in New York State.

(a) The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

(1) An emergency occurred and that the facility owner or operator can identify the cause(s) of the emergency;

(2) The equipment at the permitted facility causing the emergency was at the time being properly operated and maintained;

(3) During the period of the emergency the facility owner or operator took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and

(4) The facility owner or operator notified the Department within two working days after the event occurred. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

(b) In any enforcement proceeding, the facility owner or operator seeking to establish the occurrence of an emergency has the burden of proof.

(c) This provision is in addition to any emergency or upset provision contained in any applicable requirement.

**Item B: Public Access to Recordkeeping for Facilities With State Facility Permits -****6 NYCRR 201-1.10 (a)**

Where facility owners and/or operators keep records pursuant to compliance with the requirements of 6 NYCRR Subpart 201-5.4, and/or the emission capping requirements of 6 NYCRR Subpart 201-7, the Department will make such records available to the public upon request in accordance with 6 NYCRR Part 616 - Public Access to Records. Facility owners and/or operators must submit the records required to comply with the request within sixty working days of written notification by the Department.



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Facility DEC ID: 4421500026

Item C: **General Provisions for State Enforceable Permit Terms and Condition -****6 NYCRR Part 201-5**

Any person who owns and/or operates stationary sources shall operate and maintain all emission units and any required emission control devices in compliance with all applicable Parts of this Chapter and existing laws, and shall operate the facility in accordance with all criteria, emission limits, terms, conditions, and standards in this permit. Failure of such person to properly operate and maintain the effectiveness of such emission units and emission control devices may be sufficient reason for the Department to revoke or deny a permit.

The owner or operator of the permitted facility must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility regulated by this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations or law.

**STATE ONLY APPLICABLE REQUIREMENTS**

**The following conditions are state only enforceable.**

**Condition 5: Contaminant List**

**Effective between the dates of 11/08/2019 and 11/07/2029**

**Applicable State Requirement: ECL 19-0301****Item 5.1:**

Emissions of the following contaminants are subject to contaminant specific requirements in this permit (emission limits, control requirements or compliance monitoring conditions).

CAS No: 007439-92-1

Name: LEAD

CAS No: 007439-97-6

Name: MERCURY

CAS No: 007440-02-0

Name: NICKEL METAL AND INSOLUBLE COMPOUNDS

CAS No: 007440-38-2

Name: ARSENIC

CAS No: 007440-43-9

Name: CADMIUM

CAS No: 007440-47-3

Name: CHROMIUM

CAS No: 0NY075-00-5

Name: PM-10

Permit ID: 4-4215-00026/00005

Facility DEC ID: 4421500026

**Condition 6: Malfunctions and start-up/shutdown activities**  
**Effective between the dates of 11/08/2019 and 11/07/2029**

**Applicable State Requirement:6 NYCRR 201-1.4**

**Item 6.1:**

(a) The facility owner or operator shall take all necessary and appropriate actions to prevent the emission of air pollutants that result in contravention of any applicable emission standard during periods of start-up, shutdown, or malfunction.

(b) The facility owner or operator shall compile and maintain records of all equipment malfunctions, maintenance, or start-up/shutdown activities when they can be expected to result in an exceedance of any applicable emission standard, and shall submit a report of such activities to the department when requested to do so, or when so required by a condition of a permit issued for the corresponding air contamination source. Such reports shall state whether any violations occurred and, if so, whether they were unavoidable, include the time, frequency and duration of the maintenance and/or start-up/shutdown activities, and an estimate of the emission rates of any air contaminants released. Such records shall be maintained for a period of at least five years and made available for review to department representatives upon request. Facility owners or operators subject to continuous stack monitoring and quarterly reporting requirements need not submit additional reports for equipment maintenance or start-up/shutdown activities for the facility to the department.

(c) In the event that emissions of air contaminants in excess of any emission standard in this Subchapter occur due to a malfunction, the facility owner or operator shall compile and maintain records of the malfunction and notify the department as soon as possible during normal working hours, but not later than two working days after becoming aware that the malfunction occurred. When requested by the department, the facility owner or operator shall submit a written report to the department describing the malfunction, the corrective action taken, identification of air contaminants, and an estimate of the emission rates.

(d) The department may also require the owner or operator to include, in reports described under Subdivisions (b) and (c) of this Section, an estimate of the maximum ground level concentration of each air contaminant emitted and the effect of such emissions.

(e) A violation of any applicable emission standard resulting from start-up, shutdown, or malfunction conditions at a permitted or registered facility may not be subject to an enforcement action by the department and/or penalty if the department determines, in its sole discretion, that such a violation was unavoidable. The actions and recordkeeping and reporting requirements listed above must be adhered to in such circumstances.

**Condition 7: Emission Unit Definition**  
**Effective between the dates of 11/08/2019 and 11/07/2029**

**Applicable State Requirement:6 NYCRR Subpart 201-5**

**Item 7.1:**

The facility is authorized to perform regulated processes under this permit for:

Permit ID: 4-4215-00026/00005

Facility DEC ID: 4421500026

Emission Unit: 1-00001

Emission Unit Description:

This emission unit consists of all process operations at the facility.

Wastewater solids are dried using a low energy high efficiency (LEHE) dryer and a rotary dryer in series. The LEHE dryer accepts sewage sludge with 15-25% solids and dries it to 40-50% solids. The material is then transferred to the rotary dryer which dries the material to 90% solids. Next, the material is transferred to the pyrolysis unit.

Each dryer operates using heat generated by the pyrolysis process. The exhaust gases from the dryers combine before being treated by the packed bed wet scrubber. All of the emissions associated with the dryers and pyrolysis process pass through the packed bed wet scrubber and exit the process stack.

Building(s): SPB

**Condition 8: Renewal deadlines for state facility permits**  
Effective between the dates of 11/08/2019 and 11/07/2029

**Applicable State Requirement:6 NYCRR 201-5.2 (c)**

**Item 8.1:**

The owner or operator of a facility having an issued state facility permit shall submit a complete application at least 180 days, but not more than eighteen months, prior to the date of permit expiration for permit renewal purposes.

**Condition 9: Compliance Demonstration**  
Effective between the dates of 11/08/2019 and 11/07/2029

**Applicable State Requirement:6 NYCRR 201-5.3 (c)**

**Item 9.1:**

The Compliance Demonstration activity will be performed for the Facility.

**Item 9.2:**

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

Any reports or submissions required by this permit shall be submitted to the Regional Air Pollution Control Engineer (RAPCE) at the following address:

Division of Air Resources  
NYS Dept. of Environmental Conservation  
Region 4  
1130 N. Westcott Rd.  
Schenectady, NY 12306

Permit ID: 4-4215-00026/00005

Facility DEC ID: 4421500026

Reporting Requirements: ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 1/30/2020.

Subsequent reports are due every 12 calendar month(s).

**Condition 10: Air pollution prohibited**

**Effective between the dates of 11/08/2019 and 11/07/2029**

**Applicable State Requirement:6 NYCRR 211.1**

**Item 10.1:**

No person shall cause or allow emissions of air contaminants to the outdoor atmosphere of such quantity, characteristic or duration which are injurious to human, plant or animal life or to property, or which unreasonably interfere with the comfortable enjoyment of life or property. Notwithstanding the existence of specific air quality standards or emission limits, this prohibition applies, but is not limited to, any particulate, fume, gas, mist, odor, smoke, vapor, pollen, toxic or deleterious emission, either alone or in combination with others.

**Condition 11: Compliance Demonstration**

**Effective between the dates of 11/08/2019 and 11/07/2029**

**Applicable State Requirement:6 NYCRR 211.1**

**Item 11.1:**

The Compliance Demonstration activity will be performed for the Facility.

**Item 11.2:**

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

The facility owner or operator shall not cause or allow odors from the operation of this facility to unreasonably impact the facility's neighbors. The facility owner or operator shall periodically monitor process operations for the presence of odors, and shall take any necessary corrective action as appropriate.

In the event that an odor complaint is received, the facility owner or operator shall promptly conduct monitoring to determine the potential source of the odor and take any necessary corrective action.

The facility owner or operator shall maintain a log of each such monitoring event, including the date and time of the monitoring and a description of any corrective action taken at the facility for a period of at least five years from the date of the record. Such records must be made available to the Department upon request.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

Permit ID: 4-4215-00026/00005

Facility DEC ID: 4421500026

**Condition 12: Compliance Demonstration**

Effective between the dates of 11/08/2019 and 11/07/2029

**Applicable State Requirement: 6 NYCRR 212-2.3 (b)****Item 12.1:**

The Compliance Demonstration activity will be performed for the Facility.

**Item 12.2:**

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

The facility owner or operator shall not cause or allow sewage sludge that contains metals at a concentration greater than the cumulative pollutant loading rate specified in Table 2 of 40 CFR 503.13 to be processed at the facility.

At a minimum, the facility owner or operator shall obtain monthly average sewage sludge analysis results from each supplier that demonstrate compliance with this condition. Such records shall indicate the concentration of each metal in milligrams per kilogram of sludge, the amount of sludge received from the supplier, and the date testing was performed.

The facility owner or operator shall maintain a copy of all records used to demonstrate compliance with this condition at the facility for a period of at least five years from the date of the record and shall make copies available to the Department upon request.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: UPON REQUEST BY REGULATORY AGENCY

**Condition 13: Compliance Demonstration**

Effective between the dates of 11/08/2019 and 11/07/2029

**Applicable State Requirement: 6 NYCRR 212-2.3 (b)****Item 13.1:**

The Compliance Demonstration activity will be performed for the Facility.

Regulated Contaminant(s):

CAS No: 007439-92-1	LEAD
CAS No: 007439-97-6	MERCURY
CAS No: 007440-02-0	NICKEL METAL AND INSOLUBLE

COMPOUNDS

CAS No: 007440-43-9	CADMIUM
CAS No: 007440-47-3	CHROMIUM
CAS No: 007440-38-2	ARSENIC

Permit ID: 4-4215-00026/00005

Facility DEC ID: 4421500026

**Item 13.2:**

Compliance Demonstration shall include the following monitoring:

Monitoring Type: MONITORING OF PROCESS OR CONTROL DEVICE  
PARAMETERS AS SURROGATE

Monitoring Description:

The processes at this facility have emissions of arsenic, cadmium, chromium, lead, mercury, and nickel. These contaminants are listed as High Toxicity Air Contaminants (HTAC) in Table 2 of 6 NYCRR Section 212-2.2 and have been assigned an A rating by the Department. Accordingly, the facility owner or operator must demonstrate that the emissions from the facility's processes meet and will continue to meet the short term and/or annual guideline concentrations specified in the Department's DAR-1 guidance document, as required by Table 4 of 6 NYCRR Subdivision 212-2.3(b). The facility has provided an air dispersion modeling analysis indicating compliance with this requirement based on the operation of a wet scrubber.

The facility owner or operator shall demonstrate continuous compliance with the requirements of Table 4 by maintaining a 1-hour average scrubber water flow rate greater than or equal to 450 gallons per minute.

The facility owner or operator shall monitor and record the wet scrubber flow rate on a continuous basis. A flow rate measurement shall be taken once every 15 minutes while the process is in operation. Each set of four 15-minute averages shall be used to calculate the 1-hour average flow rate necessary to demonstrate compliance with this condition.

The facility owner or operator shall maintain a record of all data and calculations necessary to demonstrate compliance with this condition at the facility for a period of at least 5 years. Such records shall be made available to the Department upon request.

The facility owner or operator shall conduct an updated dispersion modeling analysis or stack test upon request by the Department.

Parameter Monitored: FLOW RATE

Upper Permit Limit: 450 gallons per minute

Monitoring Frequency: CONTINUOUS

Averaging Method: AVERAGING METHOD - SEE MONITORING DESCRIPTION

Reporting Requirements: ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 1/30/2020.

Subsequent reports are due every 12 calendar month(s).

Permit ID: 4-4215-00026/00005

Facility DEC ID: 4421500026

## \*\*\*\* Emission Unit Level \*\*\*\*

**Condition 14: Emission Point Definition By Emission Unit**  
**Effective between the dates of 11/08/2019 and 11/07/2029****Applicable State Requirement:6 NYCRR Subpart 201-5****Item 14.1:**

The following emission points are included in this permit for the cited Emission Unit:

Emission Unit: 1-00001

Emission Point: 00001

Height (ft.): 54

Diameter (in.): 40

NYTMN (km.): 4743.68

NYTME (km.): 588.47

Building: SPB

Emission Point: 00002

Height (ft.): 26

Diameter (in.): 12

NYTMN (km.): 4743.68

NYTME (km.): 588.47

Emission Point: 00003

Height (ft.): 39

Diameter (in.): 4

NYTMN (km.): 4743.68

NYTME (km.): 588.47

Building: SPB

**Condition 15: Process Definition By Emission Unit**  
**Effective between the dates of 11/08/2019 and 11/07/2029****Applicable State Requirement:6 NYCRR Subpart 201-5****Item 15.1:**

This permit authorizes the following regulated processes for the cited Emission Unit:

Emission Unit: 1-00001

Process: 001

Source Classification Code: 5-01-007-93

Process Description:

The Schenectady Biowaste Pyrolysis project processes 5 wet tons per hour of biosolids with a solids content of 15-25% from the Schenectady and other nearby wastewater treatment plants. The received solids pass through a low heat dryer raising the solids content to 40-50% solids.

The solids are then transferred to a rotary thermal dryer which increases the solids content to 90%. Heated gas from the pyrolysis process is used in the dryers.

The humid exhaust gas from the dryers passes through 3 cyclones to recover suspended particulate material from the rotary dryer. The rotary dryer exhaust combines with the exhaust from the low heat dryer and is treated in a packed bed wet scrubber to condense water vapor, capture particulate matter, and absorb gaseous contaminants.

Emission Source/Control: 00001 - Control

Control Type: SCRUBBER - PACKED BED

Emission Source/Control: 00004 - Control

Control Type: ACTIVATED CARBON ADSORPTION

Permit ID: 4-4215-00026/00005

Facility DEC ID: 4421500026

Emission Source/Control: 00005 - Control  
Control Type: SINGLE CYCLONE

Emission Source/Control: 00006 - Control  
Control Type: SINGLE CYCLONE

Emission Source/Control: 00007 - Control  
Control Type: SINGLE CYCLONE

Emission Source/Control: 00002 - Process

Emission Source/Control: 00003 - Process

Emission Source/Control: 00011 - Process

Emission Source/Control: 00012 - Process

**Item 15.2:**

This permit authorizes the following regulated processes for the cited Emission Unit:

Emission Unit: 1-00001

Process: 002

Source Classification Code: 5-01-007-89

Process Description:

This process consists of syngas production in a pyrolysis unit using dried sewage sludge produced in Process 001 as the feedstock. Syngas produced in the pyrolysis unit is conditioned to condense semi-volatile compounds and tars. The resulting conditioned syngas consists of carbon monoxide, hydrogen, methane, and carbon dioxide. The syngas is sent to a flare for destruction. The exhaust from the flare combines with exhaust from the drying process (Process 001) and discharges through the process stack.

Emission Source/Control: 00031 - Control  
Control Type: FLARING

Emission Source/Control: 00021 - Process

Emission Source/Control: 00025 - Process